

**REMARKS**

Paragraphs 17 – 19, 32 – 33, 35 and Examples 1 - 2 of the specification are being amended. Added text was underlined whereas deleted text was crossed out.

Claims 1-19 were in the case. Claims 1, 3, 5 – 9, 11, 14, 18 and 19 are being amended. Claim 20 is being added. In comparison to the amendment dated January 3, 2007, each claim has been provided with the status identifier.

**Status of the application**

Applicants thank for the statement that acknowledgement is made of Applicants' claim for priority under 35 U.S.C. § 119 (a) – (d) based on the applications P – 359792 filed in Poland on April 22, 2003 and P – 367052 filed on April 7, 2004 and that the certified copies have been received as well as their English translation.

**Claim Objections**

The Office Action dated September 11, 2006 objects to claims 1, 14 and 18 because of informalities. The Office Action adds that claims 1, 14 and 18 recite the term "cetomakrogel", which should be spelled "cetomacrogol". The Office Action further adds that claim 19 recites "contains further a lipophyllic phase – liquid paraffin, acetyl alcohol and an hydrophyllic phase – propylene glycol and estolate" and this recitation does not indicate whether the claim is open to other compounds.

Applicants appreciate the suggestions. The claims were amended according to comments and suggestions.

**Claim Rejections – 35 USC § 112**

The Office Action dated September 11, 2006 rejects claims 1 – 2 under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the treatment of acne and for microbicidal activity against *Propionibacterium acnes* and *Staphylococcus epidermides*, does not reasonably provide enablement for all pathogenic bacteria and fungi. The Office Action continues that the specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims.

Applicants submit that the scope of claims 1 – 2 has been herewith narrowed to treatment of pathological dermal conditions, especially in treatment of acne.

Additionally, the Office Action dated September 11, 2006 rejects claims 7 – 9 under 35 U.S.C. 112, second paragraph, as being indefinite, and adds that claims 7 – 9 recites “a solution in an ethyl-cellulose gel”, “a solution in a cream”, and “a solution in a powder”, respectively, thus it is not clear how a taurine bromamine can act as a solution in the other forms of phases described.

Claims 7 - 9 were amended according to comments. Applicants thank for suggestions.

**Claim Rejections – 35 USC § 102**

The Office Action dated September 11, 2006 rejects claims 3 – 6 and 8 - 9 under 35 U.S.C. 102(b) as being anticipated by Yazdanbakhsh et al. cited by the Examiner. The Office Action adds that Yazdanbakhsh et al. disclose the use of

taurine bromamine as an agent against the parasitic worm *Schistosomula mansonii* and *S. haematobium* as well as the use of 10 $\mu$ M and 100 $\mu$ M taurine chloramine and taurine bromamine.

Applicants submit that the scope of claims 3 – 6 and 8 - 9 has been herewith limited to treatment of pathological dermal conditions, especially to treatment of acne. Yazdanbakhsh et al. do not disclose the use of taurine bromamine as an agent against skin diseases, especially against the acne. Furthermore, Applicants submit that objections are false as the effectiveness of taurine chloramine against tested pathogens provide adequate guidance for taurine bromamine effectiveness. The tests have shown that taurine bromamine, in contrast to taurine chloramine, exerts *in vitro*, at noncytotoxic concentrations (< 0.25 mM), (at pH ~7.2), strong bactericidal activity against two important bacteria of the skin flora (*S. epidermidis* and *P. acnes*). Moreover, taurine bromamine, but not taurine chloramine shows statistically stronger activity against *P. acnes*, the ethiological agent of acne vulgaris, than against *S. epidermidis*. In addition to its bactericidal activity, taurine bromamine shows anti-inflammatory properties that strongly suggests that taurine bromamine may be a good candidate for topical therapy for acne vulgaris and other skin inflammatory diseases of bacterial ethiology. The above findings clearly indicate that taurine bromamine is able to selectively remove desired bacterial species, depending on therapeutic concentrations used. Similar anti-parasite activity of both haloamines (killing of schistosomula of *Schistosoma mansonii* as described by Yazdanbaksh et al.) does not provide any indication to similar antibacterial properties of these compounds as suggested by the Examiner.

**Claim Rejections – 35 USC § 103**

The Office Action dated September 11, 2006 rejects claims 1 – 2 under 35 U.S.C. 103(a) as being unpatentable over Nagl et al. in view of Yazdanbakhsh et al., both cited by the Examiner. The Office Action adds that Nagl et al. teaches that taurine chloramine has bactericidal properties but not expressly discloses the bactericidal or fungicidal activity of taurine bromamine.

Furthermore, the Office Action dated September 11, 2006 rejects claims 7 and 10 – 19 under 35 U.S.C. 103(a) as being unpatentable over Nagl et al. in view of Yazdanbakhsh et al., both cited by the Examiner, further in view of Patel et al. However, Nagl et al. and Yazdanbakhsh et al. do not disclose the use of taurine bromamine with other cosmetic agents but Patel et al. disclose the use of methyl cellulose, glycerol, talc, cetamacrogol etc.

Applicants submit that it is well known that HOCl and HOBr, the compounds, which also differ only in the substitution of one halogen, show distinct chemical and biological properties (A.C.Carr et al.: "Differential reactivities of hypochlorous and hypobromous acids with purified *Escherichia coli* phospholipid: formation of haloamines and halohydrins" Biochim. Biophys. Acta 1998, 1392, 254-264; R. Senthilmohan & A. J. Kettle: "Bromination and chlorination reactions of myeloperoxidase at physiological concentrations of bromide and chloride" Arch. Biochem. Biophys. 2006, 445, 235-244). Applicants and other scientists, investigating antibacterial and anti-inflammatory properties of taurine haloamines, have shown important differences between taurine bromamine and taurine chloramine in their chemical and biological properties (Henderson et al. "Production of brominating

intermediates by myeloperoxidase" J. Biol. Chem 2001, 11, 7867-7875). For example, opposite effects of nitrite and hydrogen peroxide on bactericidal activity of taurine bromamine and taurine chloramine were observed. The compounds differ also in the reactivity with thiols and in the ability to cross mammalian cell membrane.

### Conclusion

In conclusion, it would have been obvious to one of ordinary skill in the art that even tiny changes in the structure of biologically active compounds may completely and unpredictably change their functions (see: bromide vs chloride; NO vs NO<sub>2</sub>; Fe<sup>++</sup> vs Fe<sup>+++</sup>, etc.)

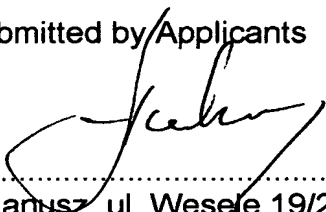
Applicants submit that the prior art made of record neither anticipates nor renders obvious the present invention.

The present amendment is believed not to present any new issues since the amendment to claims is substantially based on previously presented claims.

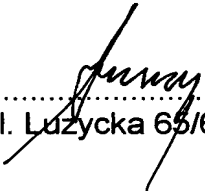
Thus, the Applicants believe that the claims in this case are now in condition for allowance and a Notice of Allowance is solicited.

Entry of the present amendment is respectfully requested.

Respectfully submitted by Applicants



.....  
Marcinkiewicz Janusz, ul. Wesoła 19/2, 30-127 Krakow, Poland



.....  
Kasprowicz Andrzej, ul. Łużycka 65/63, 30-658 Krakow, Poland